

1 RACHELE R. BYRD (190634)  
2 BRITTANY N. DEJONG (258766)  
3 **WOLF HALDENSTEIN ADLER**  
4 **FREEMAN & HERZ LLP**  
5 750 B Street, Suite 1820  
6 San Diego, CA 92101  
7 Telephone: 619/239-4599  
8 Facsimile: 619/234-4599  
9 byrd@whafh.com  
10 dejong@whafh.com

11 MARK C. RIFKIN (*pro hac vice*)  
12 MATTHEW M. GUINEY (*pro hac vice*)  
13 **WOLF HALDENSTEIN ADLER**  
14 **FREEMAN & HERZ LLP**  
15 270 Madison Avenue  
16 New York, NY 10016  
17 Telephone: 212/545-4600  
18 Facsimile: 212/545-4677  
19 rifkin@whafh.com  
20 guiney@whafh.com

21 *Interim Class Counsel for the*  
22 *Consumer Plaintiffs*

23 STEVE W. BERMAN (*pro hac vice*)  
24 ROBERT F. LOPEZ (*pro hac vice*)  
25 **HAGENS BERMAN SOBOL**  
26 **SHAPIRO LLP**  
1301 Second Ave., Suite 2000  
Seattle, WA 98101  
Telephone: (206) 623-7292  
Facsimile: (206) 623-0594  
steve@hbsslaw.com  
robl@hbsslaw.com

27 SHANA E. SCARLETT (SBN 217895)  
28 BENJAMIN J. SIEGEL (SBN 256260)  
19 **HAGENS BERMAN SOBOL**  
20 **SHAPIRO LLP**  
21 715 Hearst Avenue, Suite 202C  
Berkeley, CA 94710  
Telephone: (510) 725-3000  
Facsimile: (510) 725-3001  
shanas@hbsslaw.com  
bens@hbsslaw.com

24 *Interim Class Counsel for the*  
25 *Developer Plaintiffs*

26 [Additional counsel appear on signature page]

27 PAUL J. RIEHLE (SBN 115199)  
28 paul.riehle@faegredrinker.com  
19 **FAEGRE DRINKER BIDDLE &**  
20 **REATH LLP**  
21 Four Embarcadero Center, 27th Floor  
22 San Francisco, CA 94111  
23 Telephone: (415) 591-7500  
24 Facsimile: (415) 591-7510

25 CHRISTINE A. VARNEY (*pro hac vice*)  
26 cvarney@cravath.com  
27 KATHERINE B. FORREST (*pro hac*  
28 *vice*)  
kforrest@cravath.com  
19 GARY A. BORNSTEIN (*pro hac vice*)  
20 gbornstein@cravath.com  
21 YONATAN EVEN (*pro hac vice*)  
22 yeven@cravath.com  
23 LAUREN A. MOSKOWITZ (*pro hac*  
24 *vice*)  
lmoskowitz@cravath.com  
25 M. BRENT BYARS (*pro hac vice*)  
26 mbyars@cravath.com  
27 **CRAVATH, SWAINE & MOORE**  
28 **LLP**  
29 825 Eighth Avenue  
New York, New York 10019  
Telephone: (212) 474-1000  
Facsimile: (212) 474-3700

30 *Attorneys for Epic Games, Inc.*

31 THEODORE J. BOUTROUS JR. (SBN  
32 132099) tboutrous@gibsondunn.com  
33 RICHARD J. DOREN (SBN 124666)  
34 rdoren@gibsondunn.com  
35 DANIEL G. SWANSON (SBN 116556)  
36 dswanson@gibsondunn.com  
37 JAY P. SRINIVASAN (SBN 181471)  
38 jsrinivasan@gibsondunn.com  
39 **GIBSON, DUNN & CRUTCHER LLP**  
40 333 South Grand Avenue  
41 Los Angeles, CA 90071-3197  
42 Telephone: 213.229.7000  
43 Facsimile: 213.229.7520

44 *Attorneys for Defendant Apple Inc.*



1 Plaintiffs and Defendant Apple Inc. (“Apple”) (collectively, “the Parties”, and individually, a  
 2 “Party”) submit the following protocol to govern discovery of electronically stored information (“ESI”)  
 3 in this action. This protocol (hereinafter “protocol” or “ESI Protocol”) will serve as a supplement to  
 4 the Federal Rules of Civil Procedure, this Court’s Guidelines for the Discovery of ESI, and any other  
 5 applicable orders and rules.

6 **1. Liaison**

7 The Parties will identify liaisons to each other who are and will be knowledgeable about and  
 8 responsible for discussing their respective ESI. Each e-discovery liaison will be, or have access to  
 9 those who are, knowledgeable about the technical aspects of e-discovery, including the location,  
 10 nature, accessibility, format, collection, search methodologies, and production of ESI in this matter.  
 11 The Parties will rely on the liaisons, as needed, to confer about ESI and to help resolve disputes  
 12 without court intervention.

13 **2. Search**

14 The Parties will meet and confer about methods to search ESI in order to identify ESI that is  
 15 subject to production in discovery and filter out ESI that is not subject to discovery. The Parties  
 16 agree that such methods may include the appropriate use of Technology Assisted Review (“TAR”).  
 17 Any Party may propose to use search terms. In the event of such a proposal, the Parties shall meet  
 18 and confer via counsel as to the protocol and details for the use of search terms in the proposed  
 19 manner. No Party shall use search terms on a corpus of potentially responsive documents and then  
 20 use TAR on the documents identified by the preceding use of search terms to exclude documents  
 21 from review. The following sources of data are presumptively not discoverable and not reasonably  
 22 accessible, but will be searched for good cause shown:

- 23 1. backup systems and/or tapes used for disaster recovery;
- 24 2. systems, server and network logs;
- 25 3. systems no longer in use that cannot be accessed.
- 26 4. automatically saved interim versions of documents and emails;
- 27 5. deleted, slack, fragmented, or other data accessible only by forensics;

- 1 6. random access memory (RAM), temporary files, or other ephemeral data that are
- 2 difficult to preserve without disabling the operating system;
- 3 7. on-line access data such as temporary internet files, history, cache, and cookies;
- 4 8. dynamic fields of databases or log files that are not retained in the usual course
- 5 of business; and
- 6 9. data in metadata fields that are frequently updated automatically, such as last
- 7 opened dates.

8 **3. Unsearchable ESI**

9 ESI that has been identified as potentially responsive and for which searching is  
10 fundamentally ineffective, including images, audio files, or otherwise unsearchable ESI documents,  
11 must be reviewed without culling that relies primarily on text. However, if unsearchable ESI is part  
12 of a responsive, non-privileged family, then the unsearchable ESI does not need to be reviewed to  
13 the extent it is already included in the family-complete production.

14 **4. Family Groups**

15 A “family” refers to an email with its attachments or a document that has embedded material  
16 that is “attached” to the document after processing and extracting all the materials. Parent-child  
17 relationships (the association between a document and its attachments) will be preserved through the  
18 production of an appropriate metadata field. If any member of a family group is determined to be  
19 responsive to a Party’s document requests, then all members of that group must also be considered  
20 subject to production.

21 **5. Document Production Format for Documents Existing in Electronic Format**

22 Except as otherwise provided for in this Stipulation, all documents existing in electronic format  
23 shall be imaged and produced in TIFF/JPG or PDF format with corresponding text in accordance with  
24 the provisions contained herein. If particular documents warrant a different format, the Parties will  
25 cooperate to arrange for the mutually acceptable production of such documents. The Parties agree not  
26 to degrade the searchability of documents as part of the document production process. Notwithstanding  
27 the foregoing and any other provision in this protocol, a Party may produce any or all documents in  
28 native format as they exist in the ordinary course of business.

## A. Metadata Fields

Load files should include, where applicable, the information listed in the Table of Metadata Fields, attached as Exhibit A. However, the Parties are not obligated to include metadata for any document that does not contain such metadata in the original if it is not possible to automate the creation of metadata when the document is collected, with the exception of the following: BegBates, EndBates, BegAttach, EndAttach, Pages, NativeLink (for native files only), ProdVol, Custodian, All Custodian, FileType, Time Zone, Redacted, and Confidentiality. The metadata file shall be delimited according to the following characters:

Delimiter = ¶ (ASCII:020)

Text-Qualifier = þ (ASCII:254)

New Line = ® (ASCII:174)

Multi-value delimiter - ; (ASCII Code 059)

## B. Load Files

For each document, a delimited text file (DAT) containing metadata described in Exhibit A and an image load file (OPT) for TIFF/JPG images shall be provided. The text file name shall be the same as the Bates number of the first page of the document; do not include OCR or extracted text within a DAT file. The DAT file should be in Unicode (UTF8) format.

## C. Images

Images may be produced as either single page Group IV TIFFs, color JPGs, or PDFs. Images may be produced in black & white, except that a Party may request color images where color is reasonably necessary to their comprehension or use, and such request shall not unreasonably be denied. Each image shall be named according to a unique corresponding Bates number associated with the document. Each image shall be branded according to the Bates number and the agreed upon confidentiality designation. All documents that contain comments, deletions and revision marks (including the identity of the person making the deletion or revision and the date and time thereof), speaker notes or other user-entered data that the source application can display to the user will be processed such that all that data is visible in the Image File to the extent reasonably feasible.

## D. Native Files

i. Any native files (for example, Excel and Numbers files) produced shall have a Bates-numbered slip sheet stating the documents have been produced in native format. Native files shall be produced with the extracted text and applicable metadata fields.

ii. Spreadsheets (e.g. Excel, Google Sheets and Numbers) will be produced in native format.

iii. Presentations (e.g., PowerPoint and Keynote) will be produced in native or TIFF/JPG or PDF format.

iv. Audio and video files may be produced in native format or, for good cause, by transcription in TIFF/JPG or PDF format.

v. Delimited text files (e.g. comma-separated value (.csv) files and tab-separated value (.tsv) files) will be produced in native format.

vi. For any other types of documents, the Parties will meet and confer to discuss requests for the production of files in native format, on a case-by-case basis. Notwithstanding any production permitted under this order in non-native format, where the production of the native file is reasonably necessary to the document's comprehension or use, a request for the native file shall not unreasonably be denied.

vii. If the Parties are unable to reach agreement with regard to requests for additional documents in native-file format, the Parties reserve the right to seek relief from the Court.

## E. Text files.

A single multi-page text file shall be provided for each document, and the filename should match the first bates number of the document. Text must be extracted directly from the native electronic file of ESI unless the document requires redaction, is a scanned hardcopy document, is an image file, or is any other native electronic file that does not contain text to extract (e.g., non-searchable PDFs), in which case searchable text shall be created using OCR. Text files shall not contain the Bates number or Confidentiality Designation. A commercially acceptable technology for optical character recognition (“OCR”) shall be used.

1                   **F. De-duplication**

2                   i. To the extent exact duplicate documents reside within a Party's ESI data set, the  
3 Party shall produce only a single, de-duplicated copy of a responsive document. "Exact duplicate"  
4 shall mean documents with the same content hash values or determined to be exact duplicates by  
5 another reliable method.

6                   ii. A producing Party shall de-duplicate documents across designated custodians and  
7 populate a field of data that identifies each designated custodian who had a copy of the produced  
8 document (the "Custodian" field). Such de-duplicated documents shall be deemed produced from the  
9 custodial files of each such identified custodian for all purposes in this litigation, including for use at  
10 deposition and trial. A producing Party shall use a uniform description of a particular custodian across  
11 productions.

12                   iii. No Party shall identify and/or eliminate duplicates by manual review.

13                   iv. Hard-Copy Documents shall not be eliminated as duplicates of ESI.

14                   v. If a newly identified custodian has been added following an initial production of  
15 documents, and that custodian is included on documents already produced, the producing Party also  
16 shall provide an overlay file to allow the receiving Party to update the "Custodian" field. The overlay  
17 file shall include all custodians listed in the "Custodian" field in prior productions and any custodians  
18 newly identified in the current supplemental production.

19                   **G. Embedded Objects**

20                   Where reasonably feasible, non-image files embedded within other documents will be extracted  
21 as separate documents and treated like attachments to the document in which they were embedded.  
22 Image files embedded within documents, such as signature blocks, need not be extracted as separate  
23 documents.

24                   **H. Compressed Files**

25                   Compression file types (e.g., .CAB, .GZ, .RAR, .TAR, .Z., .ZIP, etc.) shall be decompressed in  
26 a manner that ensures a container within a container is decompressed into the lowest uncompressed  
27 element resulting in individual files. The container file itself shall not be produced.

1           **I.       Redactions**

2           The Parties may redact information that is (1) privileged or protected from discovery as work  
 3 product or by reason of any other applicable privilege or immunity, (2) protected personal information  
 4 subject to non-disclosure obligations imposed by governmental authorities, law, or regulation, or (3)  
 5 information about unannounced hardware products that are still in active development. If a file that  
 6 originates in ESI needs to be redacted before production, the file will be rendered in TIFF/JPG or PDF,  
 7 and the TIFF/JPG or PDF will be redacted and produced. The producing Party will provide searchable  
 8 OCR text for those portions of the document that have not been redacted, including all hidden content.  
 9 If documents are produced with redactions, an electronic copy of the original, unredacted document  
 10 shall be securely preserved in such a manner so as to preserve without modification, alteration or  
 11 addition the content of such document including any metadata therein.

12           **J.       Bates Numbering**

13           The BegBates and EndBates fields should be populated for all documents sequentially within a  
 14 given document, between documents, and across the production sets. These fields should not be blank  
 15 under any circumstance.

16           The producing Party will brand all TIFF/JPG or PDF images in the lower right-hand corner  
 17 with their corresponding Bates numbers, using a consistent font type and size. The producing Party  
 18 will brand all TIFF/JPG or PDF images in the lower left-hand corner with the appropriate  
 19 confidentiality designations in accordance with the Protective Order in this matter. Each responsive  
 20 document produced in native format will have its Bates number and confidentiality designation  
 21 identified in the filename of the native file.

22           **K.       Production Media**

23           The producing Party shall provide the production data via SFTP, CDs, DVDs, or external hard  
 24 drives, or by way of other electronic transfer, as between accounts at a cloud provider (subject to prior  
 25 agreement with the requesting Party), as appropriate. For any production exceeding five (5) terabytes  
 26 in size, the producing Party shall reasonably confer with the requesting Party about the means of  
 27 transmittal or production before undertaking it. The producing Party shall encrypt the production data,  
 28 and the producing Party shall forward the password to decrypt the production data separately from the

1 CD, DVD, external drive or SFTP to which the production data is saved. Each piece of Production  
 2 Media shall identify a production number corresponding to the production volume (e.g., "VOL001,"  
 3 "VOL002"), as well as the volume of the material in that production (e.g. "-001," "-002"). Each piece  
 4 of Production Media shall also identify: (1) the producing Party's name; (2) the production date; (3)  
 5 the Bates Number range of the materials contained on the Production Media; and (4) the set(s) of  
 6 requests for production for which the documents are being produced.

7 **6. Document Production Format for Documents Existing in Hardcopy**

8 All documents that are hardcopy or paper files shall be scanned and produced in TIFF/JPG or  
 9 PDF files with the Optical Character Recognition (OCR)-acquired text files, with unique Bates number  
 10 per page, consistent with the load file and Bates numbering requirements above. If a hardcopy or paper  
 11 file has any notes affixed to them, the file should be scanned and produced with the notes as well as  
 12 without the notes, and will be treated as the same document. A Party shall treat documents that are  
 13 stapled or clipped together, or that otherwise clearly appear to be a single document, as a single  
 14 document. Otherwise, a Party shall treat hardcopy documents as distinct documents.

15 **7. Instant Messages**

16 To the extent instant messages (e.g., Slack, Jabber, Google Chat) or text messages (e.g., SMS,  
 17 iMessage) are produced for any custodian, a Party shall take reasonable steps to produce such  
 18 messages in a manner that preserves the context of the communication by producing messages  
 19 occurring before or after a given message pertaining to the same topic.

20 **8. Requests for Hi-Resolution or Color Documents**

21 The Parties agree to respond to reasonable and specific requests for the production of higher  
 22 resolution or color images. Nothing in this Stipulation shall preclude a producing Party from objecting  
 23 to such requests as unreasonable in number, timing or scope, provided that a producing Party shall not  
 24 object if the document as originally produced is illegible or difficult to read. The producing Party shall  
 25 have the option of responding by producing a native-file version of the document. If a dispute arises  
 26 with regard to requests for higher resolution or color images, the Parties will meet and confer in good  
 27 faith to try to resolve it.

1        **9. Foreign Language Documents**

2            All documents shall be produced in their original language. Where a requested document exists  
3 in a foreign language and the producing Party also has an English-language version of that document  
4 that it prepared for non-litigation purposes prior to filing of the lawsuit, the producing Party shall  
5 produce both the original document and all English-language versions. Nothing in this agreement shall  
6 require a producing Party to prepare a translation, certified or otherwise, for foreign language  
7 documents that are produced in discovery.

8        **10. Re-productions**

9            Notwithstanding any provisions to the contrary, documents that are re-produced in whole or  
10 in part from the production files of another litigation, arbitration, government inquiry, or other matter  
11 may be produced in the same manner and form as originally produced in the other matter, provided  
12 however that a Party will re-produce documents in a different format if requested by a Party and  
13 reasonably necessary to the document's comprehension or use. For the avoidance of doubt, this ESI  
14 Protocol is a forward-looking document; nothing in this Order shall require the re-production of any  
15 production previously made in any of the Actions, and this Order has no bearing on any dispute  
16 regarding a production made before it was entered.

17        **11. Privilege and Documents Protected From Discovery**

18            No producing Party intends to waive any rights or protections pursuant to privacy,  
19 confidentiality, attorney-client privilege, attorney work product, and any other privileges, protections,  
20 or objections to discovery. The Parties preserve all such rights, protections, and privileges.

21            Pursuant to Fed. R. Evid. 502(d), the production of a privileged or work-product-protected  
22 document is not a waiver of privilege or protection from discovery in this case or in any other federal  
23 or state proceeding, consistent with the Protective Orders entered in the actions. (*Epic Games, Inc. v.*  
24 *Apple Inc.*, No. 20-cv-05640-YGR, ECF No. 112; *In re Apple iPhone Antitrust Litigation*, No. 4:11-  
25 cv-06714-YGR, ECF No. 199; *Donald R. Cameron, et al. v. Apple Inc.*, No. 4:19-cv-03074-YGR, ECF  
26 No. 85).

1 **12. Privilege Logs**

2 Documents withheld from discovery on the basis of privilege will be described on a log  
 3 containing information sufficient to enable the receiving Party to evaluate the claims made, including  
 4 the following information: Custodian, From, To, CC, BCC, Subject, Date and Time, Basis for  
 5 Withholding (e.g., Attorney-Client Communication), and Document Description. The privilege log  
 6 may be generated, in part, using available metadata, including the date and time sent; author/recipient  
 7 or to/from/cc names; a description of the document; and the privilege claimed. Should the available  
 8 metadata provide insufficient information for the purpose of evaluating the privilege claim asserted,  
 9 the producing Party shall include the unaccounted for fields in the privilege log, to the extent such  
 10 fields are ascertainable from the face of the document. Privilege logs should be produced within forty-  
 11 five days of the date of the withholding of such documents from production, or by January 6, 2021,  
 12 whichever is earlier. Challenges to documents withheld for privilege may be made after this deadline  
 13 notwithstanding that any deadline for Party document discovery has passed. Parties must identify  
 14 lawyers on their privilege logs in one of two ways: (1) they may provide the other Parties with a list  
 15 with the privilege log that names the lawyers on the list, identifying whether they are in-house or  
 16 external counsel, or (2) they may designate in-house attorney names with an asterisk, and designate  
 17 outside counsel attorney names with a double asterisk. To the extent attorneys are not identified in the  
 18 above fields, they shall be identified in the Description or in a separate field. Privileged  
 19 communications concerning the litigation that include trial counsel attorney names in the To, From or  
 20 CC fields that post-date the filing of the consumer complaint on December 29, 2011, need not be  
 21 included on the privilege log. A single document containing multiple email messages (i.e., in an email  
 22 chain) may be logged as a single entry. A Party is not required to log redacted documents provided  
 23 that a metadata field is provided indicating which documents are redacted, and provided that the Party  
 24 agrees to respond to reasonable requests for additional information regarding the basis for redactions  
 25 on specific documents where the basis is unclear from the document itself.

26 **13. Document Preservation**

27 The Parties have discussed their preservation obligations and agree that preservation of  
 28 potentially relevant ESI will be consistent with their obligations set forth in Federal Rule of Civil

1 Procedure 26. The parties represent that they have issued litigation hold notices to individuals whom  
2 they reasonably believe to possess relevant documents. The Parties represent that they have taken  
3 reasonable and proportionate steps to suspend or modify regular or automatic policies or practices that  
4 would result in the loss of relevant documents. The Parties shall have a continuing obligation to  
5 identify sources of relevant documents and to take reasonable and proportionate steps to preserve them.

6 **14. No Waiver**

7 Matters not addressed in this protocol shall not be deemed waived. Rather, any such matters  
8 shall be addressed by the Parties at a later time through additional meeting and conferring, and, if  
9 necessary, submitted to the Court for resolution.

10 **15. Modification**

11 This Stipulated Order may be modified by a Stipulated Order of the Parties or by the Court for  
12 good cause shown.

13  
14  
15  
16  
17  
18  
19 **IT IS SO STIPULATED, THROUGH COUNSEL OF RECORD.**

20 Dated: October 28, 2020

By: /s/ Jay P. Srinivasan

21 **GIBSON, DUNN & CRUTCHER LLP**  
22 Theodore J. Boutrous, Jr.  
23 Richard J. Doren  
24 Daniel G. Swanson  
25 Mark A. Perry  
26 Veronica S. Lewis  
27 Cynthia E. Richman  
28 Jay P. Srinivasan  
Ethan D. Dettmer  
Eli M. Lazarus

Attorneys for Defendant APPLE INC.

1 Dated: October 28, 2020

By: /s/ Rachele R. Byrd

2 **WOLF HALDENSTEIN ADLER**

3 **FREEMAN & HERZ LLP**

4 RACHELE R. BYRD (190634)

5 BRITTANY N. DEJONG (258766)

6 750 B Street, Suite 1820

7 San Diego, CA 92101

8 Telephone: 619/239-4599

9 Facsimile: 619/234-4599

10 **WOLF HALDENSTEIN ADLER**

11 **FREEMAN & HERZ LLP**

12 MARK C. RIFKIN (*pro hac vice*)

13 MATTHEW M. GUINEY (*pro hac vice*)

14 270 Madison Avenue

15 New York, New York 10016

16 Telephone: 212/545-4600

17 Facsimile: 212/545-4677

18 *Consumer Plaintiffs' Interim Class Counsel*

19 DATED: October 28, 2020

20 By: /s/ Steve W. Berman

21 **HAGENS BERMAN SOBOL SHAPIRO LLP**

22 Steve W. Berman (*pro hac vice*)

23 Robert F. Lopez (*pro hac vice*)

24 1301 Second Ave., Suite 2000

25 Seattle, WA 98101

26 Telephone: (206) 623-7292

27 Facsimile: (206) 623-0594

28 steve@hbsslaw.com

robl@hbsslaw.com

18 Shana E. Scarlett (SBN 217895)

19 **HAGENS BERMAN SOBOL SHAPIRO LLP**

20 715 Hearst Avenue, Suite 202

21 Berkeley, CA 94710

22 Telephone: (510) 725-3000

23 Facsimile: (510) 725-3001

24 shanas@hbsslaw.com

25 *Developer Plaintiffs' Interim Class Counsel*

1 Dated: October 28, 2020

2 By: /s/ Gary A. Bornstein

3 Gary A. Bornstein

4 **CRAVATH, SWAINE & MOORE LLP**

5 Christine Varney (*pro hac vice*)

6 Katherine B. Forrest (*pro hac vice*)

7 Gary A. Bornstein (*pro hac vice*)

8 Yonatan Even (*pro hac vice*)

9 Lauren A. Moskowitz (*pro hac vice*)

10 M. Brent Byars (*pro hac vice*)

11 825 Eighth Avenue

12 New York, New York 10019

13 Telephone: (212) 474-1000

14 Facsimile: (212) 474-3700

15 cvarney@cravath.com

16 kforrest@cravath.com

17 gbornstein@cravath.com

18 yeven@cravath.com

19 lmoskowitz@cravath.com

20 mbyars@cravath.com

21 Respectfully submitted,

22 *Attorneys for Plaintiff Epic Games, Inc.*

23 **PURSUANT TO STIPULATION, IT IS SO ORDERED.**

24 DATED: November 2, 2020

25   
26 **YVONNE GONZALEZ ROGERS**  
27 **UNITED STATES DISTRICT JUDGE**

## **EXHIBIT A**

## **TABLE OF METADATA FIELDS**

<u>Field Name</u>	<u>Specifications Field Name</u>	<u>Field Type</u>	<u>Description (Email)</u>	<u>Description (E-Files/Attachments)</u>
BegBates	Unique ID (Bates number)	Paragraph	The Document ID number associated with the first page of an email.	The Document ID number associated with the first page of a document
EndBates	Unique ID (Bates number)	Paragraph	The Document ID number associated with the last page of an email.	The Document ID number associated with the last page of a document.
BegAttach	Unique ID (Bates number) Parent-Child Relationships	Paragraph	The Document ID number associated with the first page of a parent email.	The Document ID number associated with the first page of a parent document.
EndAttach	Unique ID (Bates number) Parent-Child Relationship	Paragraph	The Document ID number associated with the last page of the last attachment to a parent email.	The Document ID number associated with the last page of the last attachment to a parent document.
Pages	Pages	Number	The number of pages for an email.	The number of pages for a document.
Parent Date	Parent Date	Date (MM/DD/YYYY Y format)	The date of the parent document.	The date of the parent document
Parent Time	Parent Time	Time (using Coordinated Universal Time)	The time of the parent document	The time of the parent document
DateSent		Date (MM/DD/YYYY Y format)	The date the email was sent.	
TimeSent		Time (using Coordinated Universal Time)	The time the email was sent.	
Author	Author			The name of the author as identified by the

<u>Field Name</u>	<u>Specifications Field Name</u>	<u>Field Type</u>	<u>Description (Email)</u>	<u>Description (E-Files/Attachments)</u>
				metadata of the document.
From	From	Paragraph	The display name of the author or sender of an email.	
To	Recipient	Paragraph	The display name of the recipient(s) of a document (e.g., fax recipients).	
CC	CC	Paragraph	The display name of the copyee(s) of a email.	
BCC	BCC	Paragraph	The display name of the blind copyee(s) of an email.	
Subject	Subject (e-mail)	Paragraph	The subject line of an email.	The subject of a document from entered metadata.
Custodian	Custodian		Custodians(s) designated in this litigation, including the Custodian for all copies of the Document that were removed as a result of de-duplication.	Custodian(s) designated in this litigation, including the Custodian for all copies of the Document that were removed as a result of de-duplication.
Date Created		Date (MM/DD/YYYY Y format)		Date document was created.
Time Created		Time (using Coordinated Universal Time)		Time document was created.
LastModifiedDate		Date (MM/DD/YYYY Y format)		The last modified date from a loose file.
LastModifiedTime		Time (using Coordinated Universal Time)		The time the electronic document was last modified (extracted from metadata).

1	<u>Field Name</u>	<u>Specifications Field Name</u>	<u>Field Type</u>	<u>Description (Email)</u>	<u>Description (E-Files/Attachments)</u>
2	FileName				Original file name at the point of collection
3	FileExtension				Original file extension at the point of collection
4	MD5Hash or SHA1 Hash		MD5 Hash or SHA-1 Hash	Unique MD5 or SHA-1 hash for email.	Unique MD5 or SHA-1 hash for document.
5	Text			Extracted/OCR text or a link to a file with the text.	Text
6	NativeLink		Paragraph	Native file link (native files only)	
7	Title				File property Title
8	Subject				File property Subject
9	ProdVol			Name of media that data was produced on.	Name of media that data was produced on.
10	FileType				Type of file (e.g., Word, Excel)
11	Time Zone			Time zone of data used during processing of data.	Time zone of data used during processing of data.
12	Confidentiality			Confidentiality level if assigned pursuant to any applicable Protective Order or stipulation.	Confidentiality level if assigned pursuant to any applicable Protective Order or stipulation.
13	Redacted			“Yes” for redacted Documents; “No” for un-redacted Documents.	“Yes” for redacted Documents; “No” for un-redacted Documents.